DOCUMENT RESUME

ED 092 677 95 CE 001 403

AUTHOR	Valentine, Ivan E.; Larson, Milton E.
TITLE	Vocational Education Curriculum Development in Career Education.
INSTITUTION	Colorado State Univ., Ft. Collins. Dept. of Vocational Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
PUB DATE	Mar 74
GRANT	OEG-0-72-5183
NOTE	20p.; For related documents, see CE 001 404, CE 002 234, and CE 002 235
EDRS PRICE	MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS	Accountability; *Career Education; *Curriculum Design; *Curriculum Development; Curriculum Planning; Curriculum Research; Decision Making; Disadvantaged Youth; Federal Government; Government Role; Information Dissemination; *Institutes (Training Programs); Personnel Needs; *Vocational Education

ABSTRACT

The document is an abridged version of a total report on three training institutes for curriculum personnel development for the integration of innovative concepts and new developments, specifically in the area of Career Education. This volume is composed of extracts from resource individuals' presentations to one or more of the institutes. The most significant concepts, basic elements of philosophy, and fundamental practices are included, organized around four major topics (1) Needs and purposes, (2) Basic concepts and accountability, (3) Methods and techniques (4) Problems and solutions. (The full texts of these and other presentations are available in the second volume of the Final Report of the Training Institutes, CE002235.) (AJ)

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VOCATIONAL EDUCATION CURRICULUM DEVELOPMENT IN CAREER EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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AN ABRIDGED VERSION OF THE TRAINING INSTITUTES FOR CURRICULUM PERSONNEL DEVELOPMENT FOR INTEGRATION OF INNOVATIVE CONCEPTS AND NEW DEVELOPMENTS

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COLORADO STATE UNIVERSITY

MARCH 1974

CE001 403

ED 092677

Vocational Education Curriculum Development in Career Education

An abridged version of the
Training Institutes for Curriculum Personnel Development for Integration of Innovative Concepts and New Developments

Developed and Disseminated
Pursuant to a Grant From U.S. Office of Education
Under Part I Curriculum Development Vocational Technical Education
Vocational Education Amendments of 1968
Public Law 90-576

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Grant Number OEG-0-72-5183

March, 1974

The research reported herein was performed pursuant to a grant from the Office of Education, United States Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgement in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position of policy.

FOREWORD

Curriculum Development and Career Education are high priorities in improving and expanding Vocational Education today. Success in both fields is dependent upon expertise of educators and availability of appropriate materials. To improve both the quality and quantity of curricula and curricula materials, the competency of people in curriculum development must be improved.

This abridged version of the *Training Institutes for Curriculum Personnel Development for Integration of Innovative Concepts and New Developments*, is for the busy individual having little time to study the total report. The most significant concepts, basic elements of philosophy, and fundamental practices have been extracted from the resource individual's presentations. Each of these resource persons participated in one or more of the three institutes for *Curriculum Personnel Development* sponsored by the United States Office of Education.

Approximately two hundred fifty leaders of curriculum development and career education participated in the three institutes held at Fort Collins, Colorado, Washington, D.C., and Auburn, Alabama during the year 1972-73. The original topics selected reflected the recommendations of a national advisory committee. The treatment of the topics was developed by each of the resource people after consulting with the institute co-directors.

It is hoped that this abbreviated volume will produce an impact on those people directly involved in improving curriculum and advancing career education. This motivation is the basic purpose of the co-directors for making available this volume in this form. Each major presentation was condensed to provide copy suitable for publication in periodicals or a volume of this type. Publishers may wish to consult the co-directors for permission to publish parts of this in periodicals.

Appreciation is expressed to all who assisted in making the institute and this volume a success. Special thanks is expressed to Dr. Elizabeth Simpson, Branch Chief of the Curriculum Development Branch, Division of Research and Demonstration, Bureau of Occupational and Adult Education, and to Mr. Bill Berndt, Program Specialist, Curriculum Development Branch, Division of Research and Demonstration, Bureau of Occupational and Adult Education of the U.S. Office of Education for their assistance with and support of the original project.

Most of the editorial work for this volume was done by Ralph Green, research associate, who rendered much valuable service during this total effort.

To the resource individuals, who developed the original copy and made the original presentations, the co-directors wish to say "Thank you."

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NEEDS AND PURPOSES

Curriculum Development for Career Education

*By Byrl R. Shoemaker**

Our present system of education presupposes high school is preparation for college, yet thirty years of research has failed to show the present system is even the best way to prepare for college. Youth "cop out" of a system where only 14 out of every 100 who enter first grade ever finish college. This results in catch-up education, witness such programs as ABE, National Alliance for Businessmen, WIN, and others. Such programs however, offer no solutions for the dilemma we face in America. The total curriculum must change within our public schools. Improved curriculum organization in the school program is necessary.

Career Education has become a popular term through Dr. Sidney Marland's efforts to arouse the nation to the needs of the nation's youth for mass job preparation. The state of Ohio has accepted Dr. Marland's theme by "... developing a career continuum that establishes a framework for curriculum development to provide total career motivation, orientation, and exploration within the curriculum at the various child development levels." As we have progressed on the pathway of curriculum development for career education, we have come to recognize that the principles of curriculum organization for vocational education have a relationship to the need for the expanded career education continuum concept. As we review present curriculums, it becomes necessary to reassert the purpose of education as it might be stated: "To prepare people to adjust to and improve society in which it exists." A further look at the present high school curriculum shows it subject centered in opposition to all that is known about the learning process. It worships math and science as gods rather than as tool subjects. The curriculum in a majority of our schools is not relevant to either the needs of youth or the needs of our modern society and must face massive change.

Curriculum for vocational education must be organized to consider the individual to be educated and the educational setting as well as the social and economic setting in which the individual will function. This means "... the curriculum must:

1. Prepare the student for initial job entry as a basic responsibility of the public education program
2. Be goal centered at ages 16 or above
3. Be more relevant to the social and economic conditions of today and the maturity of our youth
4. Include a core curriculum concept based upon the occupational goals of the students
5. Be concerned not only with the need for knowledge of skills, but with the total educational, economic, social and physical needs of students."

Steps in curriculum development appear obvious, but the process can be tedious. First, the tasks required of a successful worker must be identified. A second step is to translate these tasks to be learned into activities that provide a sequential learning environment for the student to successfully master those identified tasks. This second step includes course outlines complete with a title, specified course objectives, the required instructional materials, the facilities and equipment, and the required supportive services.

This calls for the expenditures of funds, either new monies or redirected funds, for new facilities and equipment, and attitude and skill improvements as it relates to teachers and the use of individualized instructional materials. Industry has exhibited great success with individualized instruction. Individual teacher attitudes will also change given the inservice training and administrative leadership that new trends dictate.

Vocational education should not be viewed only as a means of getting a job. It should be viewed as a "method in education" and the curriculum should reflect that concept. "Curriculum development starts with a job and ends with a student on that job technically competent and able to succeed. Work itself means more to the individual than the paycheck he receives. Without work there can be no leisure." The future of our nation rests on the productivity and work attitudes of the people. Jobs — not welfare — are the answer to the social and economic problems of our nation. The unique function of vocational and career education is the preparation of youths and adults for employment.

*Dr. Byrl R. Shoemaker, Director of Vocational Education, Department of Education, Columbus, Ohio.

Career Education: Concept and Curriculum

*By Duane J. Mattheis**

It has been over two years since Assistant Secretary Dr. Sidney Marland first talked about career education. Thousands of words have been written and spoken about the theme he expressed. The basic reasons for career education are evident. They lies in our present public school system, in the ranks of unemployed, rising welfare costs, and statistics on crime. Our nation's youth are coming out of school ill-prepared to get a job, the aftermath of which is loss of confidence, of self-esteem, or a sense of alienation from the main stream of adult life.

*Dr. Duane J. Mattheis, Deputy Commissioner, Bureau of School Systems, U.S. Office of Education, Washington, D.C.

The other extreme is the overeducated, at least in terms of the job market. College level teachers are forced to begin their careers abroad. Highly qualified and specialized professionals in the aerospace industry are forced into menial jobs just to exist. This is yet another facet of career education, ". . . making it possible to reenter the educational system for further training, . . . to expand knowledge so one can obtain another job, or find a new profession in later years."

Eleven basic operational objectives have been identified by the U.S. Office of Education for implementing career education programs. "The program should provide:

1. students a more unifying, relevant curriculum
2. educational experiences (to increase) knowledge of occupational alternatives and the world of work
3. non-academic career options (at all levels) with equal status of academic career options
4. students with comprehensive and flexible career-qualifying opportunities . . . progressing at one's own pace
5. greater involvement of employees in the educational experiences of students
6. students with career counseling (at all levels)
7. opportunity for counseling for reentry and retraining
8. its graduates (at all levels) with either skills to enter the world of work or to embark on further education
9. students with notions of what is wrong with the world of work
10. consumers of Career Education with a role in its design and implementation
11. students with credentials that overcome discrimination distinctions both in school and society at large."

How might designers of curriculum adapt their skills to career education programs? Of great importance is that curriculum personnel ". . . raise their consciousness of career education (as to) its basic tenets and its implications for curriculum development," particularly staying abreast of constant changes. Equally important is the interdisciplinary approach of joining hands with those in other fields. Finally, yet another need ". . . is more sharing and utilization of the many good career education and related curriculum materials that have been developed."

Validation of the curriculum materials is so important. Proper attention must be directed to ". . . rigorous testing and that (materials) be presented in a format easily understood." General usefulness becomes limited though difficult to comprehend instructions.

The opportunities and challenges for meaningful curriculum approaches are yours — the curriculum specialist. You can, at this point in time through your efforts, broaden students' horizons, expand their self-concept, and increase motivation for educational achievement, worthy goals for all. Or more simply, "You have in your hands the means to make career education work!"

Occupational and Adult Education: Priorities and Challenges

*By William F. Pierce**

The Department of Health, Education, and Welfare recently released a weighty document called, "Work in America." This document, as it analyzed work from a variety of viewpoints, found the greatest predictor of longevity was not health habits, or how often one saw the doctor, but rather it was satisfaction with one's work. Education's role in training millions of youth and adults for satisfying careers thus becomes exceedingly important, perhaps crucial in many instances.

How should curriculum developers address themselves to this responsibility? Tasks, viewed from the Bureau of Occupational and Adult Education might include:

1. Utilize the career education concept and convey to Americans the unrealistic view they hold about a college degree
2. Convince all educators that academic and vocational education are integral parts of education
3. Maximize career development opportunities K-Adult
4. Increase secondary and post-secondary vocational enrollment to more realistic percentages
5. Emphasize increased funding at the post-secondary level
6. Increase efforts for minorities, adults, and the elderly
7. Coordinate manpower programs for greater efficiency
8. Expand counseling and guidance efforts at all levels.

Implications are numerous for the curriculum specialist.

A laundry list of issues and problems are also evident as the curriculum specialist views his role.

1. There is no comprehensive study of curriculum development in vocational and career education.
2. Curriculum development lacks coordination effort.
3. Much implementation of career education concepts remains undone.
4. Many curriculum materials remain unvalidated.
5. Needs of special groups are largely unmet.
6. Dissemination of developed curriculum materials is poor.
7. Population mobility demands some curricula standardization.
8. Systematic and continuous review and updating of curricula must be provided for.

Personal biases invariably creep into any discussion. The above list is probably included. In this context, then, consider another major concern. Many teachers do not effectively utilize curriculum materials once they have

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*Dr. William F. Pierce, Deputy Commissioner, Bureau of Occupational and Adult Education, U.S. Office of Education, Washington, D.C.

been developed. This is not an indictment of the teacher as much creative and exciting classroom effort is being done. However, sometimes expediency in terms of time and resources becomes the rule. The developed materials may be poorly explained as to use, show no evidence of adaptability or learning effectiveness, or contain concepts deemed unsuitable. As a result the teacher develops his/her own materials which may not be well planned or are inferior. Much effort goes for naught!

Colleges and universities must increase their efforts in preservice and inservice to give teachers preparation they need. This also means introducing them to developed materials and how they may be adapted to the local classroom situation. It also means efforts be directed toward developing an innovative and creative teacher to utilize available resources.

The issues and problems enumerated in this discussion have one purpose, to challenge all educators to develop procedures and proposals to solve them. Some of these issues and problems have confronted education a long time, but diligent efforts can overcome them. Accept the challenge! Opportunities abound for the problem solver!

Overview of Curriculum Development Needs For Vocational and Career Education

*By E. L. Kurth**

A cultural phenomena emerging in the 70's is the sociological, psychological, economic, and educational recognition of the work ethic as a neglected aspect of the American ideal. New terms are coined, ". . . work fare and life fare are in the vocabulary as a creditibility base to offset regressive characteristics of welfare." Education is being asked to account for failing to give meaning and relevance to curriculums, to preparing for living a productive and rewarding life ". . . in short, for not preparing students to cope."

The U.S. Commissioner of Education, Dr. Sidney Marland, has given national priority to a new concept, career education. He has also given support and encouragement to the national goals of preparing every person for meaningful work or meaningful further education as part of a productive career and personal fulfillment. "They must have the competency to cope." This, then, is career education. It will give youth and adults the opportunity to make their own decisions about their life work role. It involves changes in curriculum content as well as teaching procedures. "In brief, it holds that all students need to learn about the wide range of career possibilities; . . . what is involved in getting and holding a job; sound guidance and counseling . . . to ascertain the occupational needs of their community, state and the nation; specific job skills and actual assistance in finding a job."

The school curriculum should be built around the reading, writing, and computation skills needed in the world of work. The work force of this country is employed in 20,000 distinct jobs. To provide a base for categorizing for the teaching/learning situation they have been codified into 15 major groupings or career clusters. The basis for this grouping ". . . considered five criteria: (1) they must incorporate most existing jobs, (2) they must be capable of being used for training, (3) they must be congruent with labor market entry jobs, (4) they must be translatable into curriculum materials and instructional strategies, and (5) a person with basic skills in one job of the cluster would have entry level potential in other jobs in the cluster."

The school based model assumes during the first six grades, students will become familiar with career clusters through field trips and instructional materials and first hand experiences; in grades 7-9 pupils explore clusters that interest them individually; and during grades 10-12 students concentrate in selected career areas that permit job entry after high school, preparation for post-secondary education, or a combination of both at the option of the student. An important aspect will be provision for open exit-open entry of students beyond the high school, the programs more closely atuned to individual needs.

Career education extends well beyond the classroom and involves the total community. Currently three other models are being pilot tested and are known as the rural residential model employing adult learning techniques for home bound individuals; the home model involving the entire family; and the employer based model where work experiences combine with formal training in the schools.

"Career education is a concept whose time has come. It can provide the philosophical base for the content and methods that must follow. The concept gives new meaning to learning for all youth and adults. It can and must embrace the special concerns and special needs which have been hoped for but unrealized in the past."

Federal Perspectives on R&D in Vocational Education

*By Howard F. Hjelm**

"American education is in urgent need of reform. . . We need a coherent approach to research and experimentation. . . Career Education is another major new emphasis, an emphasis which grows out of my belief that our schools should do more to build self-reliance and self-sufficiency to prepare students for a productive and fulfilling life." These are words spoken by President Nixon during 1970 and 1972. It clearly indicates his interest in Career Education and support of educational research and development. Vocational education is a key component of both.

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*Howard F. Hjelm, Director, Division of Research and Demonstration, Bureau of Occupational and Adult Education, U.S. Office of Education, Washington, D.C.

Three important issues impact on the Federal management of funding for research and development. One is the fundamental difference between science and technology and relates to funding for basic research and applied research. Obviously, developmental activities are more costly. The National Academy of Sciences and other groups recommend 10 percent be allocated for basic research. The formula appears equitable, but difficulties arise when the base for applied research itself is inadequate.

A second issue is the proportioning of funds to projects of nationally identified priorities and goals compared to field-initiated ideas coming from the grass roots of the R&D establishment. Extreme difficulties arise when resources are scarce. Funding for vocational education projects, however, appear favorable. One-half of Part C-Research funds and one-half of Part D-Exemplary Projects funds are granted to the States for field initiated activities. The other half of these funds (Part C & D) when allocated, also, carry State agency approval, thus encouraging Federal-State cooperative efforts. Other small amounts are available from Federal sources reserved for projects of national or regional significance.

A third issue is long-range funding for R&D for specific applied needs. Ideally, funding in basic research would lead to applied research activities and ultimately find direct application. This is seldom a typical sequence. Hence, funding usually follows a different course, responding to a felt need or a problem demanding solution. Projects in vocational education draw upon Part C-Research, Part D-Exemplary Projects, and Part I-Curriculum Development of the Vocational Education Act, and Model Programs of the new Occupational Education Title.

Legislation establishing the National Institute of Education is yet another dimension. The NIE has a major thrust in developing the four models for Career Education. Additionally, this Federal agency has the responsibility for building an effective educational research and development program. The Office of Education will work very closely with this new agency.

A final note is the current Federal thrust to assist State and local governments in developing and coordinating science and technology. Sound like the Research Coordinating Units in vocational education? The Office of Education sees the RCUs as a keystone in future research in vocational education.

BASIC CONCEPTS AND ACCOUNTABILITY

Accountability in Relation to Vocational Planning

*By Roman C. Pucinski**

Efram Sigel and Myra Sobel say, "Accountability is a demand to know what, if anything, has been accomplished with the money."

Judith Seltz says, "Simply put, accountability is the honoring of promises made by educators to children and their parents."

On the other hand, Harold Storm appears to sound a warning: "... What's good for Rand and the Pentagon is not necessarily totally applicable to kids .... Accountability is a trap unless one balances such a notion with human intentions ... We are flesh and blood who desperately want to appreciate all aspects of life."

Thus, education is sharply divided. Nonetheless, taxpayers grow increasingly restless with the educational system. Educators have thrust upon them a concept they must comprehend and act upon. Therefore, an intelligent discussion should assist defining and resolving some of the conflicting views.

What is the public really looking for? A recent Gallup poll concludes the public thinks of education in a pragmatic way, i.e., to get a better job, to get along better with people, to attain self-satisfaction, and so on. Americans are a practical people and educators should not lose sight of this. A true test of education is can the child be a good citizen by getting above all, a meaningful job.

Public demands for accountability then relate directly to the world of work and education's role in equipping children with the skills, knowledges, and attitudes to succeed. Career education may well be the keystone for finding answers to many of the problems, with vocational education an essential component.

Obviously the system must change. The teacher alone can no longer be responsible for student failures when an educational curriculum is thrust upon her that bores students and gives little challenge.

The public will not accept the old general education course by adding a few slides and what not about occupations and calling this a turn around of the system. Educators must demonstrate a firm determination to present a curriculum with a meaningful vocational education component. This also means providing students a respectful awareness that sooner or later each must enter the world of work one way or another. Fear not that you may train "junior" for one job, but he seeks another upon leaving school. Americans are forced to change skills five to twelve times during a working life. What's important is the child has a skill to fall back on if a job does not materialize.

From this background of dialogue the professional can perceive what is required to accomplish the educational goals. This includes determining the objectives in a global sense, then defining more precisely the expected behaviors. Relating the input, process, output, and impact factors implies a comprehensive information gathering system. These tools can supply the data for an accountability procedure to provide answers sought by the public.

Integration of accountability procedures with the concepts now advanced for career education holds great promise for saving the American public school system. Positive thinking professional educators have the knowledge and awareness of what must be done. Legislation enacted in the 1960's and 1970 amendments specifies the intent of Congress. Now, it's time to move forward!

*Roman C. Pucinski, Former Representative from Illinois, Chicago, Illinois.

Accountability in Higher Education

*By A. R. Chamberlain**

Why accountability in education? Are there some hard, fast rules to follow? Who is trying to control who? These questions identify some issues confronting higher education today. Higher education has been caught in a certain "crisis of confidence" affecting all of education, a crisis that must be examined in its proper perspective.

Student unrest of the 60's, inflation, economic insecurity, and higher education's lowered priority are cited as reasons for pursuing accountability. Yet the overriding motivation appears the desire to control. Control by those who have the financial resources although the concept is advanced under the "rubric of accountability."

If educators accept this thesis of more rigid control of financial resources, how can programs be further developed in our community colleges, state colleges, and universities? A starting point is definition of the function each institution will perform in the makeup of higher education. These roles call for a correlation between mission and size. This in turn relates to educational effectiveness and financial efficiency, a beginning for meaningful accountability.

Colleges and universities cannot be all things to all people. Some functions are *not* proper for these institutions. For instance, colleges and universities should *not* be:

1. a custodial institution to keep non-students off the streets and out of the job market
2. an adjustment center for young people to solve personal problems

*Dr. A. R. Chamberlain, President, Colorado State University, Fort Collins, Colorado.

3. recreation centers to entertain and amuse
4. social research centers to solve social ills
5. forced to carry out remedial functions better performed in the primary and secondary schools
6. offering vocational-technical programs more efficiently conducted by the community colleges.

Given these negatives, what can the state colleges and universities do? Certainly the structure should provide for measuring the effectiveness of the learning environment and assessing financial efficiency. Higher education must respond to the new demands of society. This means orienting students more realistically to job opportunities at the end of the academic program, not assuming a societal role beyond capabilities, and allowing for diversity of opportunity among institutions to permit student discrimination among those institutions they wish to attend.

More fundamental, however, is concern for the behavior of the human being, his innate need and desire to learn. This need and desire continues from age six months to at least senility. Higher education's major supporting pillar rests on this premise. Providing the atmosphere and opportunity for advanced learning, of whatever kind, must remain as a primary function of these institutions.

Given that higher education's role is defined and supported, what should be done to be accountable? Higher education must develop indicators to measure values added to each individual in the system. Difficult, but possible. Within these institutions are talented, positive thinking individuals who can develop measures of input and output that have accountability systems tied to them. From this will spring confidence and support to build a "... viable, aggressive, dynamic, and socially-related post-secondary system of which we all can be proud."

Social Aspects and Considerations of Career Education

*By L. Sunny Hansen**

Career education embraces bold new concepts! Visualize a school system which asks *not*, "Where do Johnnie and Janie fit best, but rather, how do work and leisure fit into the kind of life Johnnie and Janie want and the kinds of persons they perceive themselves to be?" *Not*, "How can they be shaped to work, but, how can work be shaped to individuals." A career education curriculum, properly conceived and implemented, will give Johnnie and Janie the opportunities to discover answers to these questions, or at the least tools necessary to seek further.

Career education has its roots in several education developments. *Vocational education* has demonstrated the need for individual occupational skill development. *Vocational guidance* advanced through a variety of tools and instruments which sought to assist persons in career making decisions. Counseling psychology, especially the work of Carl Rogers, brought a sharp focus on the self, linking personal feelings to one's aspirations and his external environment. Ginzburg and Super created a hitherto neglected part of human development as they narrowed in on the developmental aspects of occupational behavior and vocational maturity, or what they called *career development*.

A convergence of these three movements is what is now called career education, a blending together into a "humanistic curriculum" based on human interests and values. This curriculum "... provides a comprehensive umbrella for unifying learning experiences around the career needs of youth and adults and attends to the dual concerns of the individual and society."

Social dilemmas of our times, such as our changing meaning of work, the changing role of the labor force, institutional dropouts, poor career choice by individuals through lack of information, isolation of the school from the community, and our bypassed population have all contributed to an urgent need for educational reform. New delivery systems, embracing career education, are now appearing.

The K-12 career education curriculum being developed at the University of Minnesota (Wes Tennyson, Mary Klaurens, L. Sunny Hansen, and others) is conceptualized to facilitate self-development. This effort has been strongly influenced by prior work of others. This curriculum has become a systematic set of learning experiences using *teaching* and *counseling* intervention to enhance that development. Ten major dimensions (or objectives) serve as the framework to get at the major dilemmas previously identified.

Drawing from the works of Piaget, Havighurst, and others, sequential, time-framed learning tasks are identified, set into behavioral terms, and translated into performance and enabling objectives. Learning packages have been created to facilitate the learning tasks for each life stage development level. Outcomes will enable the student to clarify his goals, obtain needed skills, knowledges and attitudes, and obtain a positive self-concept in relation to others and society.

Basic criteria have been established. They are:

1. Meet the needs of all students, K-12
2. Be sequential, building on vocational tasks at each level
3. Be implemented throughout the curriculum
4. Include behavioral objectives and learning experiences at all levels
5. Provide directed occupational experience in the real world of work
6. Identify leadership and provide coordination of teacher efforts
7. Provide inservice education to orient teachers.

This suggests an approach far different than merely helping students obtain job information, choose a job, or a college. It perceives a curriculum for preventive education fulfilling personal needs while assisting the student to

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contribute meaningfully to the world's unfinished work. It demonstrates career education can be truly liberating and humanizing.

Value Bases for Curriculum Decisions

*By Jack Conrad Willers**

Alvin Toffler in his book *Future Shock* uses the phrase "cracked consensus" referring to a social phenomenom of our times.

> Value turnover is now faster than ever before in history. While in the past a man growing up in a society could expect that its public value system would remain largely unchanged in his lifetime, no such assumption is warranted today. . . The fragmentation of societies (into personal value systems) brings with it a diversification of values. We are witnessing the crack-up of consensus.

The implications from this phenomenom are enormous for the curriculum developer as he views the political, economic and social milieu that must define the sociological boundaries for learning. This loss of a clear perspective of social values leads to challenging methodology and philosophical questions.

Philip E. Slater, Charles A. Reich, and William Glasser have sought to interpret these changes. Conflicts now occur between "what was" or "what is" and new emerging values. On the one hand there are those who affirm self-effort, self-restraint, and self-denial coupled with suspicion with others. Others advocate subordination of self to occupation and institution, affirmative government control, allegiance to rational rules, and goal enhancement through organization. A third group now emerges who recognize that the individual, the true reality, must choose his own values, be neither competitive nor evaluative of others, reject concepts of excellence and merit, accept others for what they actually are, ignoring title, position, etc., and being wholly honest with others, never manipulative or coersive; consequently, human rights, dignity, and privileges become more precious than social obligations or corporate duties.

B. F. Skinner's neobehaviorism, a current popular educational effort at curriculum development and evaluation runs counter to the third group identified above. Skinner assumes an individual's feelings, integrity and intentions cannot be measured, therefore cannot be controlled. Only external behavior is measurable and hence controllable; man has no inner values by which individual men can deliberately direct their own behavior. As a result, Skinner relies upon the "technocratic elite" to control the masses, producing a behavioral technology that removes most of the opportunities to direct one's own experiences and important ingredients for learning — risk, chance and choice. Lost in the rush for accountability and behavioral objectives are those behavioral changes in the affective domain that are not discernable, yet rightly belong to public educational efforts. Standards for intellectualizing and appreciating may very well lie within the individual experiencing them, rather than in value bases that attempt to measure them.

Carl Rogers' efforts suggest a humanistic approach as an alternative to "Skinnerian operant conditioning." Rogers sees the educator as inextribably involved in the problem of social values. He asserts the possibility of human value directions coming from within individual experience, that curriculum developers recognize each person has worth to be valued in his own uniqueness, and that feelings and intentions be trusted to serve as the locus of evaluation. Rogers emphasizes when an individual is free to choose ". . . he tends to value those objects, experiences and goals which contribute to his own survival, growth and development, and to the survival and development of others."

Using the valuing concept for curriculum development, the task becomes one of allowing the students ". . . to sense the dignity and worth of his own individual being as the ground of freely, openly choosing values in common with others who retain the locus of evaluation within themselves. Ultimately curriculum development . . . (must provide) each learner with opportunities to select freely for himself . . . his own values, life-styles, and career."

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Methods and Techniques

Exploring Curriculum Tasks and Guidelines in Relation to Career Education

*By Henry J. Hermanowicz**

Overheard at a recent meeting of professional educators was a statement which seems to reflect the current view of many. It was "... one of education's troubles today began when we planned programs and educated people with little attention to whether they were employable or a job even existed. Students clearly recognize it too!" From across the table came a reply, "... and that's what career education is attempting to resolve."

If a resolution appears at hand, what is Career Education? No clear, stipulative definition appears in the literature, but assume for this discussion it involves the following:

1. Provides an understanding of major occupational fields
2. Cultivates positive attitudes toward the world of work and the human satisfaction to be derived from an occupation
3. Fosters greater self-identity
4. Develops individual propensity for wise lifetime career decisions
5. Develops occupational competencies to better realize individual goals.

Once a common base for understanding Career Education is achieved the next step is translating those concepts into a meaningful curriculum that will not duplicate the errors of the past. A monumental task? Indeed it is, but one which can draw upon previous efforts of respected individuals in the field of curriculum development.

Robert Gagne, Ralph Tyler, and the late Hilda Tiba, to name a few, have enumerated typical curriculum building tasks. Summarized they are:

1. Identify and describe the program objectives
2. Select content most significant and appropriate for the objectives
3. Translate content into instructional strategies and potential learning situations
4. Perform internal and external assessment of the program.

Three interrelated kinds of guidelines might further clarify these tasks. This required defining:

1. the role of certain fields, such as vocational education, in career education
2. basic concerns or conditions to be met for any acceptable curriculum proposal
3. suggested qualities, conditions, or procedures for dealing with these tasks.

In terms of (3), certain descriptive statements might serve the purpose and be derived from valid knowledge or invented from practical experience. They are invariably suggestive of values deemed desirable or functional, but care must be exercised to assure their usefulness.

Determination of objectives suggests they be non-ambiguous, have priority of identification, and be specific in desired outcomes according to performance standards. To oversimplify, *selection of content* means selecting the more significant concepts in a field, or fields and their relationships to each other while considering the "... social utility of the knowledge, i.e., how the knowledge has potential application in a wide variety of situations individuals face in life."

Translation of content into learning situations is an extremely difficult task. Essentially, it must provide "... meaningful practice, positive reinforcement, and readiness assessment," and involve field testing to assure practical usefulness.

In *organization*, three words are descriptive of the tasks: continuity, sequence, and integration. Continuity implies a planned reoccurrence of the teaching of certain content and skills. Sequence refers to cumulative development of skills, content, and attitudes with expanding breadth and depth. Integration means building relationship between occupational fields to enable the student to visualize broader application of his skills.

This discussion may have raised more questions than answers. Hopefully it will point to a path through the difficulties ahead. "The (answers to) questions will demand the best talents we have available. But it should be professionally exciting to see what can be done."

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Analyzing Occupations With Implications For Learning

*By Leon Lewis**

Job Analysis! Task Analysis! Performance Objectives! Element Analysis! Are these terms synonymous? Yes, taken in the context of what is a job and how it is performed. But what value is Job Analysis to the Vocational Educator? Extremely valuable say many who argue that vocational curriculum is meaningless unless worker traits, attitudes, and skills are an integral part of the curriculum structure. Industry and government consider job analysis as "... the bases for determining a

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better utilization of workers in terms of work performed." Vocational counseling is concerned not only with a job area, but the specifics within a job area.

For the purpose of training, job analysis enables training to take place in terms of specific work activities that have been identified. Evaluation of a worker is made in terms of actual work performance rather than many subjective factors. Recruitment of workers is enhanced through selection of the best qualified. In placement, workers can be matched to the required skills, knowledges, and attitudes.

The U.S. Labor Department provides a base for interested groups seeking job information. The Department has compiled the *Dictionary of Occupational Titles*, cataloging some 22,000 different ways to make a living. Further clarified is the concept of job analysis using methodology described in the *Handbook For Analyzing Jobs*.

With what does job analysis deal? It deals with two categories of data or information; the actual work performed and the worker traits required for successful performance on the job. Identified are the specific machines, tools, equipment, work aids, materials, products, and subject matter or services involved in the job. Further determined is the level of difficulty and how all of the machines, materials, etc. blend together the techniques and methodologies involved to perform the job. With regard to worker traits, identified are significant characteristics required of the person performing the job. These traits are training time, aptitudes, temperaments, interests, physical demands, and environmental (or working) conditions.

Another critical element of job analysis deals with requirements of a job. This includes general education, vocational preparation, experience, orientation, licenses, relation to other jobs, advancements possible, and supervision required. A realistic look at hiring requirements now becomes possible.

A form for recording job analysis data was devised in the Labor Department, some analyses detailed on as many as thirty pages; the data, however, is analyzed and reported as a job summary. The summary becomes a basis for the job definitions described in the *Dictionary of Occupational Titles*. Level of complexity is a procedure followed for job definition, i.e., whether the job is more a mental job, working with concrete items; or a people to people function. Thus, for the number system used in the *DOT*, the higher the code number, the lower the level, and the lower the code number, the higher the level (of complexity).

On file with the Department of Labor are about 250,000 job analyses. Most are on microfishe and are available upon request. Those seeking specific analyses must identify them by *DOT* title and code number.

Job analysis is not a panacea for all curriculum development problems. However, this emphasis upon "people, data, and things" provides a logical base from which to begin and becomes a vital element for structuring curriculum that is realistic in terms of the world of work.

Approaches to Vocational Education Curriculum

*By Patrick J. Weagraff**

What is right with the vocational curriculum? What is wrong? Is it possible to build on the strengths and eliminate the weaknesses? The questions are broad, perhaps without complete answers. It becomes necessary then to focus on specific aspects to assist the curriculum developer to improve those skills essential to vocational education curriculum work.

Four major approaches to curriculum are suggested for use in vocational education: a broad fields approach, subject centered approach, an eclectic approach, and a core approach. The vocational education field has relied almost entirely upon the subject centered approach, perhaps resulting from early legislation enacted by Congress. Recent legislation (the Vocational Act of 1963 and the 1968 Amendments), however, have been described as "people oriented." Shifting has thus occurred to other approaches, notably the cluster approach or concept.

The term cluster has taken on a variety of meanings. As the term emerges in career education, it has meant early awareness and exploration culminating in job entry competencies for several job types within an occupational cluster such as construction. Methods to develop clusters are grouped into three broad approaches: descriptive, task analysis, and sociological-psychological. All three methods are valid, usable, and usually meet the needs of curriculum developers. However, ". . . like clusters of families they cover, they possess many inconsistencies, mixed categories and blank spaces."

No "quick and easy" guidelines for curriculum development using the cluster approach are yet evident. Certain rules, however, seem applicable as one studies the process, and can be organized in steps such as: *formulation*, *design*, *verification*, and *installation*. Formulation involves identification of knowledges, skills, and attitudes to be taught. Formulation rules to follow should be: (1) state curricula outcomes in terms of learner behavior, (2) base the program upon empirical (or factual) evidence, (3) use the (student) need approach, not one the teacher is comfortable with, and (4) limit research time.

Design of the curriculum rules include: (1) provide all materials and required procedures, (2) incorporate established instructional principles into the product design, (3) specify and develop alternatives, (4) eliminate cultural biases, and (5) provide explicit (and easy to use) instructions.

Verification involves: (1) obtaining additional information as well as post-test and pre-test data, (2) pilot test the curricula, (3) evaluate the measuring instruments, (4) work with instructors, (5) encourage criticism, (6) eliminate unnecessary testing, (7) encourage teacher innovation, and (8) schedule tryouts for greatest effectiveness.

Installation means to: (1) test under realistic conditions, (2) design for minimal mechanical and logistics support,

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(3) allow for individual teacher innovation, (4) furnish teacher training materials, and (5) design for articulation between curricular areas.

Additional rules or guidelines are possible as are other equally valid approaches. However, the basic steps have been indicated. Implementation of these ideas must overcome ". . . the curse of neophobia, that is the fear of anything new." Nonetheless, vocational educators can and will rise to the challenge that change is inevitable if efficient and effective programs are to be designed for today's needs.

Developing Hierarchies of Objectives For Vocational Education Curriculum and Management

*By Patrick J. Weagraff**

Have you heard the following:

"I wish my staff knew more about the relationship of objectives to goals."

"I wish our performance objectives didn't deal with such trivial things."

"Sometimes it seems we waste a lot of time writing program objectives."

The statements reflect universal concerns of working with objectives.

Two connotations are present when dealing with performance objectives. The accomplishment of landing a man on the moon is a perfect example of a national objective which in turn generated thousands of sub-objectives directing the activities of thousands of workers. Considerable time, effort, and planning was directed to this positive accomplishment.

A negative connotation is also present in objective writing. Call it the "mistake of minutia," too many objectives that produce overlapping, although they share a commonality of being measurable. While meansurable objectives are usable and appropriate in education, in many instances they are misused. Careful planning and direction must ever be present.

Various objectives are important to the total institutional program. It is useful to think of them in three categories: learner objectives, organizational objectives, and program objectives. Each category has different levels (or hierarchies) of complexity, and each category is closely related to the others.

Consider learner objectives. These relate directly to expected outcomes of the learner and are perhaps the most familiar. The level of complexity can be identified as: task level — limited in scope specifying a very small measurable accomplishment; instructional level — broad enough to be meaningful in itself, but perceived in a "manageable unit"; curricular level — broad in scope and most time-consuming of the learner objectives, measurable competency requiring months or years of learning activity over more than one discipline.

Organizational objectives ". . . guide the staff of an instructional program in their role as members of that organization." The objectives become time-constrained statements describing the predicted measurable accomplishment of an organization. Levels of complexity are noted here also where the lowest level is a single staff member and his predicted accomplishments, to a higher level, identified as a unit, then higher to a division level. Each higher level is defined by its size and function. Cost factors are frequently incorporated to serve as achievement indicators.

Program objectives reflect an integration of both "learner" and "organizational" objectives and are usually termed in such a manner as to indicate time and/or cost relationships of large groups of learners and their degree of objectives' accomplishment. Statements reflect ". . . broad long term predicted outcomes determined by those responsible for policy and guidance of instructional programs." These objectives form the basis for the "management by objective" approach to administration of an educational program.

In conclusion, four recommendations seem appropriate for future use of objectives: (1) each organization committed to use of objectives must specify the *level* being measured, the task level reserved for the teacher; (2) measurable objectives should evolve from the policy level *downward*, thus helping eliminate confusion and frequent change; (3) exercise better "control" on policy and program objectives, avoiding fads, and assuring that the primary consideration is the student; and (4) administrators and supervisors deal with more than objectives at the task level, addressing themselves more closely to the type and level of objectives.

Goal statements in precise and measurable terms is a major advance in education. Now it is time to look beyond a superficial level. As a professional, in cooperation with your colleagues, you can refine and use hierarchies of objectives to increase learning and become more accountable.

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Adapting Curriculum to Local Needs

*By James E. Wall**

Have you heard teachers exclaim, "The curriculum guide looks great, but how do I use it?" or, "The materials won't fit, but don't tell the Dean, he won't listen." A question and a statement that typify teacher reaction when adapting new curriculum in local schools.

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Problems of implementation vary widely, but pattern themselves around the following:

1. Administrators fail to anticipate instructor problems and lack a feedback system.
2. Failure to focus on the learning process instead of course content.
3. The instructor's lack of understanding, competency, or specificity of materials.
4. Instructor frustration upon discovering the learning situation does not respond as prescribed.

Yet another problem is lack of validation of materials. Textbooks are rarely field tested before use. Curriculum developers are "overzealous" in their promotion. Evaluation of new materials by teachers and administrators has also proved unreliable in most instances. Field testing often just precedes publication so that needed revisions are seldom incorporated in printed materials. This emphasizes that wise selection of curriculum materials must consider evidence of learning effectiveness before adoption.

Upon adoption, curriculum personnel perform a strategic role in the adaptation. It is establishing an interactional rapport between curriculum designer(s) and local school personnel, or sometimes called the change agent-client relationship. The change agent obviously must intimately know the curriculum materials. He must also have knowledge of group processes, be skilled in interpersonal relationships, and be authoritative and sincere with school personnel. From this must develop an on-going relationship to communicate and solve problems for mutual benefit, a relationship that must be correctly perceived by school personnel.

Administrators have an important role in adapting that includes planning, support, and coordination. The instructors have responsibility to operationalize and install the curriculum. These roles can be subdivided into major areas: (1) assuring readiness, (2) selecting components, (3) procuring equipment/supplies, (4) holding workshops and inservice sessions, (5) seeking consultative assistance, (6) implementing sequentially, (7) assessing achievement, (8) supporting instructional personnel, and (9) demonstrating the curriculum's usefulness to others.

An instructor's manual is a vital part of curriculum adaptation in a school system. The manual is intended to supplement curriculum materials and present relevant external information about properties not apparent on inspection. Included is information about how the curriculum was developed, its validity, and how it may be implemented. Topic headings could be: (1) course description, (2) population (student) description, (3) performance objectives, (4) criterion-reference tests, (5) how the curriculum was verified as to effectiveness, and(6) how to most effectively administer the curriculum.

Adapting curriculum to the local school is not an easy process. Problems do develop to varying degrees. Communication between all individuals in the process is vital and mandatory. Clear communication channels, coupled with understanding, properly written materials, and a desire to succeed, will greatly facilitate the process.

Validation of Curriculum in Vocational-Technical Education

*By James E. Wall**

The dictionary might define *validation* as: an act, process, or instance of confirming, corroborating, or supporting on a sound basis or authority. For the purpose of this discussion, in looking at curriculum development, validation is an *aspect*, rather than a specific step; more than a process of prediction; to demonstrate worth of; *to validate is to investigate*. "Validation searches for evidence. . .that curriculum can cause individuals to achieve predetermined objectives." Failure should reflect on the instruction system, not the student.

A systems model for producing a curriculum will ensure that testing is conducted at the right steps in the process. Consider this model:

1. Conduct feasibility study
2. Conduct task analysis
3. Develop training objectives
4. Develop criterion tests
5. Validate the criterion tests
6. Validate training objectives
7. Develop learning sequence and structure
8. Develop learning strategies
9. Develop instructional units (lessons)
10. Validate learning units
11. Implement and field test the system
12. Follow-up the graduates.

From this system, validation procedures can be injected at various steps to assess the developed curriculum.

For instance, step 5 above, a criterion referenced test is administered to untrained-unskilled students and trained-skilled students, then correlating scores, item by item. This analysis improves the test as a measuring instrument. The training objectives can be validated concurrently with step 5, with proper construction.

The learning sequence and structure can be validated using the criterion test which has been validated and revised. This is administered to a group of *trained* persons (30-50). Analysis looks to dependency and interdependency between and among units. Step 10 (above) requires that each unit of instruction is tested and revised until 85% of a sample of trainees achieve the criterion. Revision might result in resequencing or new strategies.

Field testing becomes the final phase of the process. The instructor's manual is developed following actual usage. Various tasks become necessary resulting in analysis of the learning effectiveness. Constant revision is appropriate while in use with teacher inputs.

Discussion of the Criterion Reference Tests (CRT) seems appropriate and is central to all validation efforts. Objectives can be recast as items of the CRT. Assuming objectives are derived from accurate job analyses, the objectives must have true validity. Reliability of the test

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items depends upon observable and measurable behavior of those tested, but can be tested successfully comparing untrained and trained persons. Statistical treatment is required for analysis which in turn will direct necessary revisions. Item by item analysis seems advisable.

The curriculum designer might conclude validation is time consuming and requires expertise not ordinarily found among staff members. The procedure, nonetheless, is an orderly process. It is a necessary process if one seeks to identify sound and productive persons who can perform.

The Professional Staff in Curriculum Functions

*By Frank H. Wimer**

"The chances of being *accidentally* successful are very small."

"There are enough ways to fail, that you had better *plan* in order to be successful."

Murphy's laws provide a background to understanding planning that is so essential for building a professional staff in curriculum functions.

What are some basic concerns when establishing an organization? One should ask:

1. What is our mission?
2. What are the goals?
3. What *key* results are necessary?
4. Do we have indicators to show success?

From the organization must spring real leadership addressing itself to constant changes occurring in methods of curriculum development. Current trends demonstrate a change from single school constructed to massive and funded projects, utilization of a variety of talents (including non-educators), team efforts versus individual efforts, and designs away from a single text. Therefore, leadership must deal with people and move them to accomplish defined objectives, and do it democratically, not autocratically.

This suggests a systems approach to organization and professional staff development. Solution of curriculum problems requires:

1. maintaining an attitude of *service* to the customer
2. effectively planning, organizing, and controlling
3. documenting progress
4. using dynamic structures
5. using the latest "tools" and "techniques."

Effective administrators learn and use systems when:

1. determining a personal and institutional philosophy
2. determining goals
3. defining specific objectives with quantifiable end results
4. comparing benefits and costs
5. analyzing alternatives and selecting the "best" alternatives
6. allocating resources
7. evaluating results in terms of objectives and goals
8. performing the functions of a "change agent"
9. using formative and summative evaluation for instituting changes.

Competent personnel are available to exert leadership functions in vocational and technical education. It requires organization, identification of required skills for this function, and a plan for implementation. The "tools" have been developed, yet major curriculum problems remain unsolved. The time has never been more "ripe" for those individuals with leadership capabilities to come forward with plans for managing education and for developing appropriate curriculum.

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Problems and Solutions

Problems and Issues Identified With Development of Curriculum For Inner-City Youth and Adults

*By Lawrence Davenport**

Charges and counter charges abound regarding education today. Public schools have failed to be relevant! Students graduate with little preparation for the world of work! Colleges and universities continue to "turn out" a surplus of degree holders! Society assumes any choice other than college is a lesser one! Vocational Education is "second class" education!

Influential individuals (both inside of and outside of) education now appear in support of massive changes that must come in the school curriculum. The need is desperate! Of 3.7 million youngsters leaving formal education in 1970-71, nearly 2.5 million lacked adequate skills to cope with the job market, many with no skill whatever.

Career education, as conceived and properly implemented, promises increased opportunities for all students. "Simply stated, career education is a modernization of our curricula, making the best of what is there, putting emphasis where it is needed most, and seeing that the greatest number of students possible reap the benefits." Implementation, therefore, implies restructuring the curriculum, teacher retraining, reeducation (and rededication) of administrators, improved support services, and even getting students out of the school to explore the real world of work.

This latter aspect of career education is not untried. Baltimore and New Haven schools rekindled interest of potential dropouts by introducing courses leading directly into jobs in the health occupations field. It is notable that many of the students went on to college, an opportunity previously denied. Also, the unemployment level of this group is significantly lower than comparable age groups. This example can go far in changing attitudes of educators (the public is already well advanced beyond the professional).

The growth of Manpower programs attests to the failure of public schools. Manpower programs comprise thousands of casualities of the school curriculum, forty-four percent of them blacks. These programs, however, are only remedial and do not get to the "heart" of the problem. A restructured curriculum can allow for the minority needing college preparatory education, while at the same time answering the needs of the vast majority by giving them the necessary motivation to gain needed skills before leaving the formal school situation.

Education must address itself on how to prepare relevant education, allowing for full development of a student's potential and providing a full range of career options. The curriculum, the total of all school directed experiences, becomes the vehicle for change. Major responsibility for curriculum revision rests on the shoulders of the classroom teacher at the level where learning takes place. Vocational and career education become essential components in the process.

Career education's goal is to assure every student, upon leaving school, skills needed for entry into an occupation. Teachers, in cooperation with parents and students, should be given encouragement and the time to review, reevaluate, and revise proposed curriculum, thereby providing total input and support to meet the needs of inner-city youth and adults. It is no longer debatable that our present curriculum is outmoded and needs changes! What is needed now is society's and administrators' commitment of resources and personnel to design curriculum that reflects the needs of a changing society. The concepts of career education promise that accomplishment.

"We shall and we must overcome the obstacles in the way of curriculum reform because the very survival of public school education hangs in the balance."

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Curriculum Problems — Inner-City Youth and Adults

*By Cleveland Dennard**

Population migrations! Changes of fertility rates? Business/industry movement to the suburbs! Realities today that make educational decisions subject to changes as never before, particularly as they affect the inner-city. Where are the jobs today? Where will they be a decade from now? In twenty years? What will be the magnitude of demand?

The educator must address himself to these issues and many more. Out of these considerations and deliberations must come the kinds of decision-making that results ". . . in an educational environment for which the curriculum is designed." Valid educational experiences must be ". . . based on the fact that, at some point in time, the output of students will (be) justified." The magnitude of demand must also be identified along with specific tasks to master. From the validity standpoint this need must be known now, as well as the future.

Curriculum decisions for the inner-city demand different kinds of orientation sensitivity. Minority group concentration in the metropolitan areas has produced distortions not evident in national statistics. A four percent unemployment rate nationally might mean 31% unemployment in Washington, D.C. or New York City. Preparing

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students for non-existent jobs in these situations borders on a "cruel hoax," unless educators assume the responsibility to understand and to capitalize on the characteristics of the employment market and include experiences in the curriculum that enable the student to cope with the problems of employment.

How do you do this? One way is to interview employers to find out what they expect of the job seeker. Another is to employ advisory committees and *truly* listen to what they say. Listen to the feedback from both employers and students to see how well the student came through on the job after leaving school. From this information must come an analysis that should reveal the importance of skill development, personal attitudes toward a job and other workers, and aggregates of activity that can be translated into educational experiences to assure student capability to perform a job.

Many people in the inner-city are angry. They perceive educators as perfectionists. When it is determined this is not the case, student behavior is invariably deviant. Recent disorders on our college campuses illustrate this dilemma. It is time vocational educators understand the precipitory factors for this deviant behavior. Then, through diligent efforts, make our programs responsive, vibrant, and meaningful. Its sociological base as a curriculum, in the sense described by Charles Prosser, is as applicable today as when he wrote it. Why not apply it now?

Problems and Issues Identified With Developing Curriculum for Inner-City Youth and Adults

*By Harry Huffman**

Curriculum building or modification for students who are uncommitted, dropout, suffer from deprivation and prejudice, and are "put down" — in short inner-city youth represent a unique challenge to educators; a challenge that is immense, yet exceeding personally rewarding. This report deals with the findings resulting from projects conducted at Ohio State University, Hunter College in New York, some Philadelphia teachers, East St. Louis, Detroit, Laredo and Denver.

The curriculum designer faces many problems, some obvious, some hidden. *Limited financing* and the *numbers game* are obvious. Limited financing is a constant problem, while the numbers game, ". . . is one of producing so many curriculum guides with so many pages, the key being production," without regard for the true results. Establishing priorities and organization is a must, unless you want a "hip pocket" operation where little sense of urgency exists. Along with organization comes the planning for administrative and community support; without this cooperation a program is destined to fail.

Opportunity for early occupational choice emerges as a key consideration. Inner-city youth need the exposure to the world of work to study their own interests, feelings, aptitudes to job requirements, and the opportunities available to them. So important, too, is the experience of finding out that if you don't like a job, life could be miserable if you are forced to stay.

Interwoven in programs standards is the ". . . concept of performance objectives and prescriptive treatment where you *do* permit students to work at their own rate." Standards should have a basis in ". . . how many students perfected performance objectives which enable them to find a job, whatever job and whatever level."

A viable program provides for considerable input from those directly concerned, the teacher and the students. The teacher must be permitted to innovate where required and be supported by supervisors and administrators. Students must feel involved, know that they are not being "put down" each day, and know that their feelings are considered as important as the subject matter being taught. Well written performance objectives can assist the problem. Most educators today can write performance objectives with reference to skills such as typewriting, welding, etc. which measure skill achievement. How many are concerned with the affective domain? Unless equal concern is shown to developing good feelings toward job satisfaction and relating those feelings to successful people on the job, skill development may be to no avail. "A curriculum developed by teachers with expert advise, (sufficient) student input, and (wise, effective) advisory committee input results in a 'workroom' curriculum" directed to students and community needs, as opposed to an "ivory tower" curriculum that ignores their inputs.

Seven high priority items emerge. They are:

1. Adequate staffing and resources must be provided for curriculum development
2. Vocational education must accept as a major mission the education of inner-city youth
3. Prescriptive, individualized programs must be implemented
4. Educators must strive to reorganize jobs to fit people
5. Develop a system of positive reinforcement about work life rather than imposing our own work ethics which may be out of date
6. Use performance objectives to provide for achievement motivation of students and use the positive reinforcement system to stimulate people to seek satisfaction in their lives
7. Ascertain if vocational education is a "real tool" for equal opportunity.

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How Do You Rate?

*By Bill Berndt**

How high do you rate yourself as a curriculum developer? Do you have skills that need sharpening? Refocused? Developed further?

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Curriculum is the formalized program in our public and private educational institutions created to impart to students the skills, knowledges, and attitudes to meet the demands of society. Are vocational educators fully sensitive to what society expects? Are student and employer needs identified and translated into curriculum experiences that satisfy employment goals?

Eleven competencies to be possessed by curriculum development personnel are as follows:

1. Be able to organize and coordinate the work of a team
2. Have knowledge of the various theories that relate to curriculum development and have the ability to analyze these theories and adapt them for use in vocational and technical education
3. Have the capabilities for diagnosing the present and projected needs of the learner
4. Have the ability to make competent judgements as to the validity and importance of content material
5. Have a comprehensive understanding of sociological and psychological principles of learning
6. Have the ability to develop objectives in behavioral terms
7. Have the capability to organize content and learning processes in sequential activity
8. Have the ability to develop procedures for measuring learner's progress
9. Have the ability to translate objectives and instructional procedures into plans for curriculum materials and facilities
10. Have the ability to design and conduct programs which will assist in testing and evaluating curriculum materials
11. Have the acumen and acquaintance with the dynamics of the social and political action in order to implement change in curriculum.

Undoubtedly few individuals possess high competencies in all eleven, nor is the list exhaustive. Yet, multiple competencies are required and continuous updating in new concepts and techniques is a necessity for the curriculum specialist.

Role of the Curriculum Center

*By Elizabeth Simpson**

The Curriculum Development Branch, Division of Research and Demonstration, now a part of the Bureau of Occupational and Adult Education, U.S. Office of Education has a multipurpose role. The Curriculum Development Branch, Division of Research and Demonstration was created to provide coordination of curriculum development across division lines and to address national concerns in curriculum development and management in vocational-technical education and career education. The Curriculum Development Branch, Division of Research and Demonstration staff includes specialists in curriculum development, collection and dissemination, teacher and leadership education, and career development guidance and placement.

The role of the Center is more than that of a dispenser of grants and contracts, although grants and contracts is a function of this unit. A number of projects funded under Part I, Curriculum Development, Vocational Amendments of 1968, are coming to completion. Among the outcomes of the projects are curriculum guides for Two Year Post-High School programs including:

1. Library Technical Assistant
2. Air Pollution Technology
3. Social Services
4. Teacher Aide
5. Medical Radiologic Technology
6. Veterinary Science Technology
7. Law Enforcement
8. Educational Media Technology

Information on availability of these publications and other materials can be obtained from the office of the Curriculum Center.

Fiscal '71, '72, and '73 saw additional projects funded, among them the five regional curriculum laboratories, output of which is now being disseminated widely among the various states. The efforts put forth by these regional labs should result in improved decision-making with respect to needs and assignments of responsibility, less duplication of efforts, and improved dissemination.

The Curriculum Development Branch, Division of Research and Demonstration continues to address itself to identified national problems and concerns related to curriculum development:

1. There is no comprehensive state-of-the-art study of curriculum development in vocational-technical and career education.
2. Although much work in curriculum development is in progress, efforts tend to be spotty and uncoordinated, resulting in much needless duplication. Little attention is directed to those areas not fitting easily into traditional categories.
3. Little attention has been given the relative effectiveness of the various procedures and products of curriculum development in vocational-technical and career education.
4. There has been insufficient attention to bases for curriculum decisions, including social conditions, needs, and value considerations.
5. Many curriculum materials in use have not been validated through rigorous testing.
6. In general, curriculum development does not reflect the continued advances made in educational media and technology.

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7. There are vast curriculum needs of special groups.
8. Frequently, a major weakness has been failure to widely disseminate and to provide for effective use of the materials.
9. Mobility of persons in the labor force indicates necessity for emphasis on standardization of certain types of curricular content; certainly an emphasis upon adaptibility is needed.
10. There is no provision for a systematic and continuous review and updating of curricula.

These are highlights of the Curriculum Development Branch, Division of Research and Demonstration's role and responsibilities. Every effort is being made to coordinate the work with other agencies of government, states, regions, and professional organizations.